

AMENDMENT TO THE CLAIMS

The following claim listing replaces all prior listings and versions of the claims:

LISTING OF CLAIMS

1-3. (Cancelled)

4. (Currently Amended) A soldering method for soldering a first electrode having a solder portion to a second electrode by melting under heat the solder portion of the first electrode, the method comprising steps of:

(a) coating a soldering paste on at least one of the solder portion of the first electrode and the second electrode, the soldering paste comprising liquid basis formed of resin component, an activator for removing oxide film produced on surfaces of the solder portion, and a flake-like shaped metal powder including a core metal and a surface metal covering a surface of the core metal, wherein the solder portion easily wets and spreads along the surface metal when the solder portion is fluidized, and the core metal includes tin or tin-based alloy, and the surface metal includes silver;

(b) positioning the first electrode and the second electrode so that the soldering paste coated in the step (a) is disposed between the solder portion of the first electrode and the second electrode;

(c) letting molten solder come in contact with the second electrode by melting the solder portion under heat and wetting and spreading the molten solder along surfaces of the metal powder included in the soldering paste by guiding the molten solder; and

(d) solidifying the molten solder after the step (c), thereby forming a soldered portion which connects the first electrode to the second electrode, wherein:

in the step (a), an amount of the flake-like shaped metal powder in the soldering paste is 1-20 vol %,

in the step (c), the surface of the core metal is exposed at a portion of the metal powder which is not in contact with the molten solder, while the surface metal is taken into the core metal by dissolution, and

in the step (d), the soldered portion is ~~uniformly~~ formed by the solder portion and most of the metal powder included in the soldering paste for coating in the step (a).

5-7. (Cancelled)

8. (Previously Presented) The soldering method of claim 4, wherein the activator includes one of N (2-hydroxyethyl) iminodiacetic acid, m-hydroxybenzoic acid, L-phenylalanine and mesaconic acid.

9. (Previously Presented) The soldering method of claim 4, wherein:

the solder portion of the first electrode includes a plurality of solder portions and the second electrode includes a plurality of protruding portions corresponding to the plurality of solder portions,

the method further includes, before the step (c), a step of contacting the first electrode and the second electrode,

in the step of contacting, at least one of the solder portions of the first electrode and at least one of the protruding portions of the second electrode are contacted, while at least one of the solder portions is not in contact with a corresponding one of the protruding portions.

10. (Previously Presented) The soldering method of claim 4, wherein, in the step (a), and the first electrode and the second electrode protrude from respective substrates.